Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

HW#74H: RRS

Honors Geometry

Due: Friday, March 27th, 2015

**Failure to show all work and write in complete sentences will result in LaSalle!**

|  |  |  |  |
| --- | --- | --- | --- |
| 1) One diagonal of a rhombus is 6 inches and the other is 8 inches.  a. How long is each side of the rhombus?  b. Find the perimeter.  c. Find the area. | | 2) The diagonal of a square is 20 cm. Find the length of one side of the square and the perimeter of the entire square.  a. How long is each side of the square?  b. Find the perimeter.  c. Find the area. | |
| 3) Name each quadrilateral—*parallelogram, rectangle, rhombus,* and *square*—for which the statement is true.   1. It is equilateral. 2. The diagonals are congruent. 3. It can contain obtuse angles. 4. It contains no acute angles. | | 4) Classify the special quadrilateral. *Explain* your reasoning. Then find the values of *x* and *y.* | |
| 5) Classify the special quadrilateral. *Explain* your reasoning. Then find the values of *x* and *y.* | 6) The diagonals of rhombus *PQRS* intersect at *T*. Given that *m*∠*RPS* = 30° and *RT* = 6, find the indicated measure.   1. *m***∠***QPR* 2. *m***∠***QTP* 3. *RP* 4. *QT* | |  |

|  |  |
| --- | --- |
| 3) The size of the obtuse angle of a rhombus is twice the size of its acute angle. The side length of the rhombus is equal to 20 feet. Find its area. | 4) The lengths of the diagonals of a rhombus are 10 and 24 meters. Find the perimeter of the rhombus. Find the area. |
| 5) The perimeter of a rhombus is 60 feet and one of its diagonal has a length of 20 feet. Find the area of the rhombus. | 6)Given: *ABCD* is a rhombus.  B  A  Prove:  x  C  D |
| 7) |